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| Time Stamp | 2004/10/05 16:20 | 2004/09/30 09:25 | 2004/09/30 09:26 | 2004/09/30 09:45 | 2004/09/30 10:54 | 2004/09/30 10:54 | 2004/09/30 12:28 | 2004/09/30 12:29 | 2004/09/30 16:10 | 2004/09/30 16:14 | 2004/09/30 16:15 | 2004/09/30 16:33 | 2004/09/30 16:34 |
| DBs | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB |
| Search Text | (("4249174") or ("5265024") or ("5757322") or ("6014606") or ("6154143") or ("5293430") or ("6088486") or ("6301300")).PN. | 007333.apn. | run\$1length with color | (run\$1length with color) same (threshold pre\$1determined) | ((run\$1length with color) same (threshold pre\$1determined)) and @ad<=20011108 | colo\$1r near4 run\$1length | (colo\$1r near4 run\$1length) and @ad<=20011108 | ("4847689").PN. | run\$1length same (background with (foreground data character)) | run\$1length with (background with (foreground data character)) | (run\$1length with (background with (foreground data character))) and @ad<=20011108 | run\$1length with (background with (foreground non\$1background pattern character)) | (run\$1length with (background with (foreground non\$1background pattern character))) and @ad<=20011108 |
| # \$ | 17 | | 406 | 36 | 33 | 222 | 165 | 2 | 172 | 2 | 28 | 34 | 31 |
| Туре | IS&R | BRS | BRS | BRS | BRS | BRS | BRS | IS&R | BRS | BRS | BRS | BRS | BRS |
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| run\$1length same (background with (foreground non\$1background pattern)) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/09/30 16:34 | | 0 | |
| (run\$1length same (background with (foreground non\$1background pattem))) and @ad<=20011108 | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/10/05 13:56 | | | 0 |
| (run\$1ieng RLC) with background | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/10/05 13:15 | | | 0 |
| (run\$1length RLC) with foreground | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/10/05 13:57 | | | 0 |
| (weather adj1 (map image)) with (trim\$3 crop\$3) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/10/05 16:27 | | | 0 |
| ((weather precipitation) near3 (map image)) with (trim\$3 crop\$3) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/10/05 16:22 | | | 0 |
| USPAT; US-PGPUB; ((weather precipitation) near3 (map image)) same (trim\$3 crop\$3 cut\$3) EPO; JPO; DERWENT; IBM_TDB | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/10/05 16:22 | | | 0 |
| (((weather precipitation) near3 (map image)) same (trim\$3 crop\$3 cut\$3)) and @ad<=20011108 | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/10/05 16:34 | | | 0 |
| image with (trim\$3 crop\$3) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/10/05 16:27 | | | 0 |
| crop\$4 adj1 image | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/10/05 16:28 | | | 0 |
| trim\$4 adj1 image | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/10/05 16:30 | | | 0 |
| ((crop\$4 adj1 image) (trim\$4 adj1 image)) and 382/100-154.cds. | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/10/05 16:32 | | <u> </u> | 0 |
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| BRS | | 17 | radar with (precipitation near3 (image map)) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/10/05 17:27 | | 0 | |
| | BRS | 107 | run\$1length with (smooth\$3 gap) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/10/05 17:29 | | 0 | |
| £ £ | BRS | 0 | run\$1length with fill\$3 with gap | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/10/05 17:28 | | 0 | |
| , K | BRS | 85 | run\$1length with (smooth\$3) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/10/05 17:29 | | 0 | 0 |
| | BRS , | 4 | (run\$1length with (smooth\$3)) and @ad<=20011108 | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/10/05 17:33 | | 0 | |
| <u> </u> | BRS | 22076 5 | 22076 (short near\$4 (run run\$1length)) with (fill\$3 chang\$3 substitut\$3 5 replac\$3) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/10/05 17:33 | | 0 | |
| | BRS | 112 | (short adj1 (run run\$1length)) near3 (fill\$3 chang\$3 substitut\$3 replac\$3) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/10/05 17:33 | | 0 | |
| : <u>;</u> | BRS | 06 | ((short adj1 (run run\$1length)) near3 (fill\$3 chang\$3 substitut\$3 replac\$3)) and @ad<=20011108 | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/10/05 17:34 | | 0 | |
| . ⊬ | BRS | 222 | (image same ((EOL end\$1of\$1line) with (cod\$3 encod\$3 transmi5))) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/10/06 09:06 | | 0 | |
| , K | BRS | 134 | (image with ((EOL end\$10f\$1line) with (cod\$3 encod\$3 transmi5))) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/10/06 09:06 | | 0 | |
| <u> </u> | BRS | 100 | (image with ((EOL end\$10f\$1line) near3 (cod\$3 encod\$3 transmi5))) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/10/06 09:07 | | 0 | |
| | BRS | 98 | ((image with ((EOL end\$10f\$1line) near3 (cod\$3 encod\$3 transmi5)))) and @ad<=20011108 | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/10/06 11:31 | | 0 | |
| <u> </u> | BRS | 1872 | ((line scan\$1line row column) near3 (length size count)) with colo\$1r | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/10/06 11:33 | | | 0 |

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|---------------------------------|---------------------------|---------------------|---|---|---------------------|---|----------|------|
| BRS 406 ((line | | <u> </u> | ((line scan\$1line row column) adj1 (length size count)) with colo\$1r | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/10/06 11:34 | | | 0 |
| BRS 287 ((line sca | ((line sca | ine sca | ((line scan\$1line) adj1 (length size count)) with colo\$1r | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/10/06 11:35 | | <u> </u> | 0 |
| BRS 226 ((line sa | İ | ne sc | ((line scan\$1line) adj1 (length size)) with colo\$1r | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/10/06 11:35 | | | 0 |
| BRS 165 ((line so | ((line so | ne so | ((line scan\$1line) adj1 (length)) with colo\$1r | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/10/06 11:35 | | | 0 |
| BRS 132 (((line s | (((line s | line s | (((line scan\$1line) adj1 (length)) with colo\$1r) and @ad<=20011108 | uspat; us-pgpub; Epo; jpo; derwent; Ibm_tdb | 2004/10/06 14:13 | | | 0 |
| BRS 160 map wit | | th wit | map with boundar\$3 with color | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/10/06 14:13 | | | 0 |
| BRS 4864 (remov | | mov | (remov\$3 delet\$3) near3 (boundar\$3 border\$1) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/10/06 14:25 | | | 0 |
| BRS 8 (map w | (map w (bound | ap w | (map with (boundar\$3 near3 colo\$1r)) and ((remov\$3 delet\$3) near3 (boundar\$3 border\$1)) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/10/06 14:14 | | | 0 |
| BRS 133 (remov | | , Out | (remov\$3 delet\$3) near3 ((boundar\$3 border\$1) adj1 line) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/10/06 14:25 | • | | 0 |
| BRS 13 ((remo | ((remo | emo | ((remov\$3 delet\$3) near3 ((boundar\$3 border\$1) adj1 line)) and map | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/10/06 14:48 | | | 0 |
| (carrie BRS 20 same (de≴1 | (carrie same (de\$1 | arrie me ≥\$1 | (carrier adj1 signal)same modulator same transmitter same receiver same demodulator same (compressor encoder coder) same (de\$1compressor de\$1coder) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/10/06 15:20 | | | 0 |
| BRS 2 (carrie | (carrie same | arrie Te | (carrier adj1 signal)same modulator same transmitter same receiver same demodulator) and ((compressor same de\$1compressor) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/10/06 15:21 | | | 0 |
| BRS 3 ((TV) | (TV (carri | اَ≝َحَ | (TV television) adj2 transmitter) same (vertical adj1 blanking) same (carrier with modulat≴3) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/10/06 16:13 | | | 0 |

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| | JSPAT; US-PGPUB; EPO; JPO; DERWENT; BM_TDB | 2004/10/06 16:14 | | | |
| ig" with (carrier with modulat\$3)) | JSPAT; US-PGPUB; EPO; JPO; DERWENT; BM_TDB | 2004/10/06 16:16 | | 0 | |
| ' with (carrier with modulat\$3)) | JSPAT; US-PGPUB; EPO; JPO; DERWENT; BM_TDB | 2004/10/06 16:16 | | 0 | |
| | JSPAT; US-PGPUB; EPO; JPO; DERWENT; BM_TDB | 2004/10/07 09:01 | | | |
| | JSPAT; US-PGPUB; EPO; JPO; DERWENT; BM_TDB | 2004/10/07 09:40 | | | |
| | JSPAT; US-PGPUB; EPO; JPO; DERWENT; :BM_TDB | 2004/10/07 09:41 | | | 0 |
| | JSPAT; US-PGPUB; EPO; JPO; DERWENT; (BM_TDB | 2004/10/07 09:36 | | | 0 |
| | JSPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/10/07 09:40 | | | 0 |
| | JSPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/10/07 10:31 | | | 0 |
| <u>10 10 10 10 10 10 10 10 10 10 10 10 10 1</u> | JSPAT; US-PGPUB; EPO; JPO; DERWENT; BM_TDB | 2004/10/07 10:31 | | | |
| | JSPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/10/07 12:28 | | | |
| _ | JSPAT; US-PGPUB; EPO; JPO; DERWENT; RM TOR | 2004/10/07 12:28 | | | |
| | carrier with modulat\$3) (carrier with modulat\$3)) and @ad<=20011108) and @ad<=20011108 5.13.ccls. | (1) (1) (1) (1) (1) (1) (1) (1) (1) (1) | DBS USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | DBS Stamp St | Stamp Stam |

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Parameterized Ray-tracing

C. H. Séquin, E. K. Smyrl

July 1989 ACM SIGGRAPH Computer Graphics, Proceedings of the 16th annual conference on Computer graphics and interactive techniques, Volume 23 Issue 3

Full text available: pdf(4.62 MB)

Additional Information: full citation, abstract, references, cliings, index

The construction and refinement of a computer graphics scene is unacceptably slow when using ray tracing. We introduce a new technique to speed up the generation of successive ray traced images when the geometry of the scene remains constant and only the light source intensities and the surface properties need to be adjusted. When the scene is first ray traced, an expression parameterized in the color of all lights and the surface property coefficients of all objects is calculated and stored for ...

² CMPack: a complete software system for autonomous legged soccer robots Scott Lenser, James Bruce, Manuela Veloso May 2001 Proceedings of the fifth international conference on Autonomous agents

Additional Information: full pitation, abstract, references, index terms Full text available: (258.81 KB)

This paper describes a completely implemented, fully autonomous software system for soccer playing quadruped ro\-bots. The system includes real-time color vision, probabilistic localization, quadruped locomotion/motion, and a hierarchical behavior system. Each component was based on well tested algorithms and approaches from other domains. Our

design exposed strengths and weaknesses in each component, and led to improvements and extensions that made them more capable in general, as well a ...

Keywords: action selection and planning, autonomous robots, lessons learned from deployed agents, multi-agent teams, real-time performance

3 Region representation: quadtrees from boundary codes

Hanan Samet

March 1980 Communications of the ACM, Volume 23 Issue 3

Full text available: 📆 pdf(714.15 KB) Additional Information: full citation, abstract, references, citings

An algorithm is presented for constructing a quadtree for a region given its boundary in the form of a chain code. Analysis of the algorithm reveals that its execution time is proportional to the product of the perimeter and the log of the diameter of the region.

http://portal.acm.org/results.cfm?coll=ACM&dl=ACM&CFID=28726512&CFTOKEN=836...

10/7/04

Keywords: borders, chain codes, data structures, quadtrees, regions

4 HDR and perception: Perception-motivated high dynamic range video encoding Rafal Mantiuk, Grzegorz Krawczyk, Karol Myszkowski, Hans-Peter Seidel August 2004 ACM Transactions on Graphics (TOG), Volume 23 Issue 3



Full text available: cof(630,96 KB) Additional Information: full citation, abstract, references, index terms

Due to rapid technological progress in high dynamic range (HDR) video capture and display, the efficient storage and transmission of such data is crucial for the completeness of any HDR imaging pipeline. We propose a new approach for inter-frame encoding of HDR video, which is embedded in the well-established MPEG-4 video compression standard. The key component of our technique is luminance quantization that is optimized for the contrast threshold perception in the human visual system. The quant ...

Keywords: DCT encoding, HDR video, MPEG-4, adaptation, high dynamic range, luminance quantization, tone mapping, video compression, video processing, visual perception

⁵ A hybrid bilevel image decode algorithm for group 4 FAX



Chengjie Luo, Clement Yu

September 1991 Proceedings of the 14th annual international ACM SIGIR conference on Research and development in information retrieval

Full text available: pdf(977.88 KB) Additional Information: full citation, references, index terms

6 A general approach to connected-component labeling for arbitrary image representations



Michael B. Dillencourt, Hannan Samet, Markku Tamminen April 1992 **Journal of the ACM (JACM)**, Volume 39 Issue 2

Full text available: sof(1.91 MB)

Additional Information: <u>full citation</u>, <u>abstract</u>, <u>references</u>, <u>citings</u>, <u>index</u> terms, <u>review</u>

An improved and general approach to connected-component labeling of images is presented. The algorithm presented in this paper processes images in predetermined order, which means that the processing order depends only on the image representation scheme and not on specific properties of the image. The algorithm handles a wide variety of image representation schemes (rasters, run lengths, quadrees, bintrees, etc.). How to adapt the standard UNION-FIND algorithm to permit reu ...

7 Image processing as an exemplar of parallelism applied to graphics Harry F. Smith, Patrick Plusnick, Mark Sarojak, William Seitz March 1996 ACM SIGCSE Bulletin, Proceedings of the twenty-seventh SIGCSE technical symposium on Computer science education, Volume 28 Issue 1



Full text available: cot(792.36 KB) Additional Information: full ocation, abstract, references, index terms

In surveying the possible applications of parallel computing, computer graphics is singularly attractive. This is because many computer graphics algorithms are so computationally intensive and yet also inherently very parallel in nature. The primary objective of an NSF grant to the University of North Carolina at Wilmington was to establish parallel computing in the undergraduate curriculum. A secondary objective was to address the issue of parallelism for computer graphics; however, curricular ...

Rendering: Integrating pre-integration into the shear-warp algorithm



J. P. Schulze, M. Kraus, U. Lang, T. Ertl

July 2003 Proceedings of the 2003 Eurographics/IEEE TVCG Workshop on Volume graphics

Full text available: 551(2.35 MB)

Additional Information: full citation, abstract, references, index terms

The shear-warp volume rendering algorithm is one of the fastest algorithms for volume rendering, but it achieves this rendering speed only by sacrificing interpolation between the slices of the volume data. Unfortunately, this restriction to bilinear interpolation within the slices severely compromises the resulting image quality. This paper presents the implementation of pre-integrated volume rendering in the shear-warp algorithm for parallel projection to overcome this drawback. A pre-integrat ...

Multimedia application sharing in a heterogeneous environment

Klaus H. Wolf, Konrad Froitzheim, Peter Schulthess

January 1995 Proceedings of the third ACM international conference on Multimedia

Full text available: (3) htm(53.68 KB) Additional Information: full citation, references, citigos, index terms

Keywords: CSCW, application sharing, collaboration environments

10 Anima II: a 3-D color animation system

Ronald J. Hackathorn

July 1977 ACM SIGGRAPH Computer Graphics, Proceedings of the 4th annual conference on Computer graphics and interactive techniques, Volume 11 Issue 2

Full text available: Report (2 27 MB)

Additional Information: full citation, abstract, references, citings

An animation software system has been developed at The Computer Graphics Research Group which allows a person with no computer background to develop an animation idea into a finished color video product which may be seen and recorded in real time. The animation may include complex polyhedra forming words, sentences, plants, animals and other creatures. The animation system, called Anima II, has as its three basic parts: a data generation routine used to make colored, three-dimensional objects, a ...

11 Real-time software-based video coder for multimedia communication systems Ho Chao Huang, Jau-Hsiung Huang, Ja-Ling Wu



September 1993 Proceedings of the first ACM international conference on Multimedia

Full text available: (119.60 KB)

\$1.ps(190.28 KB)

Additional Information: full citation, references, index terms

Keywords: multimedia system, software-based video compression, video data compression, video phone/conference

12 Partial evaluation for media processing

Scott Draves

September 1998 ACM Computing Surveys (CSUR)

Full text available: pdf 164.94 KB) Additional Information: full citation, references, citings, index terms

13 Efficiently using graphics hardware in volume rendering applications Rüdiger Westermann, Thomas Ertl

